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IN THE

Supreme Court of the United States

OCTOBER TERM, 1970

No. 700

ESCAMBIA CHEMICAL CORPORATION, *Petitioner,*

versus

STAMICARBON, N. V., *Respondent.*

RESPONDENT'S REPLY TO PETITIONER'S SUPPLEMENTAL BRIEF

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INTRODUCTION

Petitioner now comes to this Court with its *third* brief, in support of its Petition for Certiorari, herein.

This time Petitioner concentrates not on the merits of its own case, nor upon the "Questions" it originally presented; but, instead, upon a purported, *but mistaken*, analogy to *Blonder-Tongue Laboratories, Inc.* v. *University of Illinois Foundation et al* (Number 338 in this Court).

In so doing, Petitioner herein urges that the *Fifth* Circuit Court of Appeals reached its decision below by reasoning that the invention of the van Waes patent in suit lacked "predictability" and thereforé held the patent valid. Petitioner so argues, of course, for the transparent purpose of attempting to fit the hand of this case into the glove of the Seventh Circuit's *Blonder-Tongue* decision. Thus, Petitioner *now* states that the Fifth Circuit adopted the Seventh Circuit's "concept of predictability" from *Blonder-Tongue*, in order to "preempt the standard of patentability in *Graham* v. *John Deere Co.* 383 US 1 (1966)." (Supplemental Brief at page 5).

Not so.

The Decisions Below in This Case Did Not Rest on "Unpredictability", But, Properly, on "Non-Obviousness".

It is wholly inaccurate, indeed absurd, for Petitioner to propound the notion that the Fifth Circuit herein used "predictability" rather than "obviousness" as the test of patentability. Neither the word "predictability", nor any synonym, derivative, or concept

thereof, appears anywhere in the entire vocabulary of the Fifth Circuit's decision below. Nor, for that matter, did the word "predictability", nor any concept of "predictability", appear anywhere in the District Court's Opinion in this case.[1]

To the contrary, *both* the District Court *and* the Court of Appeals in *this* case scrupulously and precisely measured the validity of Respondent's van Waes patent against the tests laid down by the Court in *Graham v. John Deere*. The Fifth Circuit Opinion points out:

> "We have already discussed the process prescribed by the Supreme Court in *Graham v. John Deere, supra*, whereby the trial court first makes factual determinations as to the state of the prior art, differences between it and the claim at issue, and the level of ordinary skill prevalent in the pertinent art, and then makes a legal determination of obviousness or non-obviousness based upon these factual determinations. *The district court in the instant case followed these procedures.*" (See Petition, 30a)

As to the *only two* non-obviousness Findings challenged by Petitioner below, the Fifth Circuit held:

> "... we have previously examined the evidence supporting them and found them to be *well founded*. There is, therefore, *nothing in the record* which undercuts the factual determinations upon which the district court *decided* [the question of] *obviousness*." (Petition, 30a).

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[1] The original Petition herein, and Petitioner's Reply Brief, filed October 23, 1970, were *equally* silent as to any "predictability" issue, or "Question", raised in *this* case. Compare Supreme Court Rule 40 1 (d) (2).

Clearly the Fifth Circuit did not "preempt" but carefully followed "the standard of patentability announced by this Court in *Graham* v. *John Deere* 383 US 1 (1966)" in this case.

There is absolutely no analogy or relationship between the issues determined and decided by the Fifth Circuit below in the present case, and the issues determined and decided by the Seventh Circuit in *Blonder-Tongue*. Nor is there any parallel between the "unpredictability" reasoning of the Seventh Circuit as to the validity of the Isbell patent there in suit, and the clearly proper "unobviousness", reasoning followed by the Fifth Circuit below—which reasoning is based upon overwhelming *affirmative* evidence from Petitioner's own witnesses (which the Fifth Circuit independently examined, as it stated, "de hors the clearly erroneous rule", Petition 27a).

Unlike Blonder-Tongue, in This Case Affirmative Evidence Abounded To Show the Invention of Respondent's Patent Was Not Obvious.

As in its previous briefs, Petitioner once again seeks to cloud this Court as to the merits of this case by avoiding discussion of the *evidence* upon which both courts below unquestionably found the invention of Respondent's patent to be clearly unobvious, and therefore valid. This is understandable because a consideration of that evidence is absolutely fatal to Petitioner's cause. A review thereof shows that there are no fundamental, or even comparable, issues which could properly relate the present case to the Questions this Court will consider in its review of *Blonder-Tongue*. For instance—

Not one of the four decisions (in the Seventh and Eighth Circuits) dealing with the Isbell patent involved in *Blonder-Tongue* indicates that there was *any* evidence therein of actual, and direct, *but wholly unsuccessful*, efforts by persons skilled in the art to solve the *same* problem in the *same* manner devised by the patentee.

By contrast, in the present case, abundant evidence clearly established that many scientists had attempted to solve the *very same problem*, some even trying closely similar techniques, but all had uniformly failed. The affirmative force of this evidence, underlying the District Court's Findings of Fact (all of which were affirmed and upheld by the Fifth Circuit Court of Appeals, either as unchallenged or as "well founded"[2]), is readily demonstrated as follows.

(1) Work in Japan

In the late 1940's (1948-1950), Kijima, the chief corrosion expert of the major Japanese corporation, Sumitumo Chemical Company conducted extensive experiments in an effort to find a satisfactory method of manufacturing urea in apparatus which would not require the "expensive" and disadvantageous silver linings which had been characteristically used in the art. (Finding of Fact 9). Kijima's experiments, as revealed by Petitioner's own evidence, included tests with specimens of the *same* "18-8" stainless steel called for in Petitioner's van Waes patent, even allegedly with oxygen present in the carbon dioxide, in a urea manufacturing process. Even so, Kijima *totally failed* to discover Respondent's invention.

[2] See Petition, page 30a.

We reproduce on the facing page herein the photographic exhibit from Defendant's Exhibit 37 (Appendix, page 1387). The lowermost specimen on this photograph, labelled "18-8", is the stainless steel specimen *after* Kijima's experiment. The photograph demonstrates that the corrosion Kijima observed—and was unable to correct—was so severe that the metal specimen had substantially dissolved away. (The dashed line on this photograph indicates the original shape of the test specimen, and illustrates the portion of that metal which had entirely disappeared as a result of the corrosion). Kijima acknowledged that his 18-8 stainless steel corroded so severely that the rate of corrosion was from three to eleven inches per year. As a result of these experiments, Kijima admitted he then *abandoned* any further work with stainless steels. Instead, he directed his further research to work with copper alloys (Appendix 977-978) —totally unrelated to stainless steels (Appendix 553). Pursuant to this evidence, the District Court stated in Finding of Fact 25: "In fact, *all of Kijima's work* with such stainless steels [as required by Respondent's patent herein] *still resulted in corrosion* under the reaction in test conditions *at an unacceptably high rate.*"

The Fifth Circuit agreed, and observed that

> "... the scientist [Kijima] working in this area switched to a different metal to be used in an oxygen-free atmosphere. It is an understatement to say that *there is no indication of obviousness when the general approach is abandoned and another is then pursued.*" (Petition, 33a)

(2) Work in Switzerland

In another instance, Petitioner-Defendant offered evidence of the so-called "Inventa-Vulcan" process at

DEFENDANT'S EXHIBIT No. 3.

Ems, Switzerland, in an attempt to show that the invention of Respondent's patent had been obvious. However, the actual evidence showed the Inventa-Vulcan work (allegedly with stainless steels and oxygen in the urea process) to be unsuccessful—so much so that Petitioner's own trial expert testified that "the level of corrosion" of the then-existing Inventa process was "*not acceptable*" because the "situation of corrosion" at Inventa was so bad that it "was *unsatisfactory*" (Appendix 716-717). The District Court held in Finding of Fact 23 that this evidence "was not persuasive", that Inventa-Vulcan "knew of or were possessed of the inventive subject matter of the claims of the van Waes patent in suit". The Court of Appeals specifically referred to "correspondence in the record indicating that the Inventa-Vulcan process was *not functioning* in the desired manner", and upheld the District Court's finding. (Petition 29a)

(3) Work in England

Petitioner also offered evidence of purported experiments by a well-known corrosion expert F. H. Keating, in England in the early 1940's. Allegedly, Keating had observed that the addition of oxygen could control the corrosion of stainless steel exposed to the claimed urea reaction conditions. Cross examination of Petitioner-Defendant's sole witness testifying as to this work showed, however, that in fact Keating had *never* done any work with a stainless steel urea *reactor*—the witness, Clark, stated "We had *not* done it". (Appendix 1058-1059). *After* his experiments, Keating's own employer, Imperial Chemical Industries ("ICI") (the largest chemical corporation in England) "*gave up* using austenitic [stainless] steel". (Appendix 1040).

All of Keating's work thus led to the *same* failures or abandonments that characterized the Swiss and Japanese efforts. Keating and ICI discovered no alternative to the "expensive" and disadvantageous silver-lined urea reactor.[3]

(4) Work in the United States

The unobviousness of Respondent's invention, demonstrated by the *affirmative* evidence of the above incidents, is confirmed by still further evidence of the conduct of the Petitioner-Defendant Escambia's own contractor and indemnitor in this litigation in the United States, Chemical Construction Company ("Chemico").[4]

Even before 1952, Chemico's own experts admittedly had full knowledge of all of Kijima's work, and all of the prior art which Petitioner has insisted made the addition of oxygen "obvious" for the control of corrosion of stainless steel in the urea synthesis process. Yet, Chemco's own chief engineer, Lucien Cook, also admitted that in 1952, and at least until 1956, he and

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[3] Finding of Fact 26, Petition, 10a, states "There is *no evidence* indicating that F. H. Keating ever conceived of or tested the possibility of using a stainless steel-lined reactor or autoclave for the urea synthesis reaction." The Court of Appeals pointed out that when Keating supposedly published reports of his experiments "The use of *silver vessels* in the process is . . . discussed in the articles'. (Petition, 32a).

[4] Chemico conducts and controls the entire defense of this litigation (Finding 6K) as well as the related "Customer Suits" (Cf. footnote, Supplemental Brief, page 5), and is the real "party in interest" throughout.

his company were *still advocating the use of silver-lined urea reactors,* (Appendix 586-587) which had all the disadvantages described by the Court of Appeals. (See Petition 20a). Not until *after* publication of Respondent's own patent in suit, did Chemco *ever* propose, design, or build a *stainless-steel* lined urea reactor (Finding 6J), and since then *every* Chemico plant has used stainless steel and oxygen (admitted in *each* co-pending "customer" suit).

(5) Other Evidence of Non-Obviousness

Similarly, evidence of work in other countries showed total failure to discover the secret of the oxygen control of corrosion in urea. In Germany, I. G. Farben removed oxygen and used lead-lined vessels, as did Montecatini in Austria. In Italy, copper additions were tried, but these had to be avoided as undesirable and expensive, and the French even tried submerging the whole process in hot oil. Thus, the District Court held in Finding 22:

> 22. Although it was known in the published literature prior to April of 1953 that oxidizing agents could be employed to control corrosion of stainless steel apparatus used in reducing environments and that certain oxidizing agents had been successfully employed to maintain passivity of the stainless steel apparatus in the synthesis of urea, the use of oxygen as described in the patent in suit cannot be considered obvious in view of the evidence indicating that: (a) Oxygen is a relatively mild oxidizing agent and the synthesis environment is extremely corrosive; (b) the corrosion phenomenon is known to intensify as temperature and pressures are highly elevated; (c) the prior

art references teach the removal of oxygen, and characterize its presence as "harmful" and teach the removal of the "oxide film" before using stainless steel in urea apparatus—all in documents which teach the use of other relatively expensive oxidizing agents such as cupric oxide.[5]

The Fifth Circuit specifically "examined the evidence" supporting this Finding, and found it "to be well founded". (Petition, 30a).

CONCLUSION

In summary, then, the evidence Petitioner itself presented at trial established unequivocally that while numerous prior workers in the field had made extensive efforts to use stainless steel reactors in the manufacture of urea, and some had even tried the general idea of adding oxygen for the control of such corrosion, *without exception all had failed.*

This evidence *affirmatively* demonstrates the unobviousness of Respondent's patent.

There is, thus, absolutely no basis for Petitioner's assertion that there is any similarity in the decision by the Fifth Circuit Court of Appeals, in the present case, with the decision of the Seventh Circuit, which this Court will review, in *Blonder-Tongue.*

Petitioner's earlier briefs failed to show any basis for grant of certiorari on the merits of this case; Peti-

[5] This was repeatedly emphasized in, e.g., prior U.S. patents of the E. I. du Pont de Nemours Corporation.

tioner has not shown in its Supplemental Brief any "coat-tail" relationship with *Blonder-Tongue*.

The Petition should be denied.

Respectfully submitted,

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